



# MEMO

## To: President-Elect Trump Re: Innovation, Productivity, and Competitiveness

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BY ITIF STAFF | NOVEMBER 2016

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*America's economic future will depend on driving innovation, productivity growth, and competitiveness, and to do that, the federal government needs new and more creative approaches to public policy.*

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At the outset of the 2016 presidential campaign, the Information Technology and Innovation Foundation (ITIF) released a strategy memo titled “Tech Policy 2016: What Presidential Candidates Should Be Talking About.”<sup>1</sup> It outlined an ambitious campaign agenda that hinged on three key themes—fostering innovation, boosting productivity, and competing globally—and it offered a series of specific policy proposals to advance such an agenda. That was the poetry we hoped to hear in the campaign. Now that the election is over, it is time for the prose of governing. In this memo, we revisit the same three themes of innovation, productivity, and competitiveness, and we offer a revised set of actionable proposals that the new administration can accomplish in its first year through executive authority or by working with Congress on discrete legislative measures that would be comparatively easy to accomplish.

Cutting across all of our recommendations is a basic recognition and a core conviction: America’s economic future will depend on successfully driving innovation, productivity growth, and competitiveness, and to do that, the federal government will need to adopt new and more creative approaches to public policy. Critically, this will depend on ensuring that economic policy is guided by a new “innovation economics,” rather than the dominant neoclassical approach to economics or a resurgent Keynesian populism.<sup>2</sup> This being the case, ITIF’s first recommendation is that the president-elect should enlist an economic team—in the National Economic Council (NEC), in the Council of Economic Advisers (CEA), in top Treasury posts, and in other federal agencies—that understands

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how the economy works in the real world, not just in the world of neoclassical economic theory, nor only at the macroeconomic level, but also at the “mesoeconomic” level of industries and firms, where most of the action related to innovation, productivity, and competitiveness occurs. This economic team should include people whose scholarly backgrounds and professional experience extend to fields such as business administration and innovation policy, among others.

ITIF’s next recommendation would be both substantive and powerfully symbolic: The president-elect should address the problem of quarterly capitalism. Firms drive innovation, productivity, and competitiveness, but if their incentives are tilted toward short-term returns they will be less effective than they can be otherwise. So the president-elect should establish an interagency task force, led by the NEC, Treasury, and the Securities and Exchange Commission (SEC), to identify steps the federal government can take to limit corporate short-termism and encourage corporate leaders to invest for the future. To guide the task force, the president-elect should name an advisory committee that includes corporate CEOs, financial system leaders, and scholarly experts.

## **RECOMMENDATIONS TO FOSTER INNOVATION**

**Convene a national conversation about tradeoffs and reciprocal obligations between public and private stakeholders to accelerate innovation.**

Interest groups regularly come to Washington with a long list of self-focused requests, but they are rarely pressed to make commitments in return. To address this, the president-elect should convene a multi-day conference to assess not just how the government can help industries and interest groups, but also what these entities will commit to do for the public interest in return for loosening up regulations, taxes, and other impediments to growth. As an example, the administration could obtain firm commitments on cost, review times, and cost-benefit analysis from labor groups, environmentalists, contractors, and planning boards that would speed the time and reduce the cost of any major infrastructure spending. **(Responsibility for carrying out this proposal: NEC.)**

**Appoint chief innovation officers in every federal agency and charge them with developing and implementing formal innovation strategies.**

Federal agencies have the ability to drive innovation not only in their own programs and operations, but also in the broader economy. Yet few agencies, if any, have formal innovation strategies. The president-elect should charge every agency with developing a comprehensive innovation strategy within 180 days of taking office; this should cover not just how the agencies themselves will innovate internally, but also how they can spur innovation in the sectors of the economy they touch. To ensure these plans are carried out, the White House should appoint chief innovation officers for every cabinet-level agency (along with other technology-related agencies, such as NASA), and these federal CINOs should meet quarterly to exchange and cross-pollinate best innovation practices. **(Responsibility for overseeing this proposal: OSTP.)**

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### Identify and reward the best innovations across the federal government.

To spur innovation within government, many countries create competition amongst agencies and publicly showcase the best applications.<sup>3</sup> For example, Singapore incentivizes the best public-sector employees to share their ideas through a Knowledge Management Experimentation Program. This gives technologically savvy bureaucrats a platform to share best practices for innovation, and the best innovators receive funding to pursue their concepts (plus prizes and promotions in many cases).<sup>4</sup> The White House should require all federal agencies to report annually on their 10 best innovations of the year, which would be compiled and released in an annual report. Further, the White House should establish federal innovation awards that recognize the most innovative federal agencies and the most innovative federal workers. **(Responsibility for overseeing this proposal: OSTP.)**

### Make innovation a part of performance expectations for senior government leaders.

In the private sector, senior executives are often evaluated in part on their ability to lead innovation, whether in developing new products, services, and businesses, or in creating new organizational models. Innovation is similar in the public sector, even if it is related more to delivering constituent services or executing mission-oriented requirements as efficiently and cost-effectively as possible. Senior leaders in the public sector should have innovation included in their performance expectations each year, and their progress should be assessed in their year-end evaluations. **(Responsibility for overseeing this proposal: OPM.)**

### Establish a formal process for evaluating how regulatory proposals impact innovation.

The Office of Management and Budget's (OMB's) Office of Information and Regulatory Affairs (OIRA) is charged with, among other things, assessing the cost and benefits of major regulatory proposals. But OIRA does not specifically assess proposed rules as to their potential effect (positive or negative) on future innovation. As such, the president-elect should charge OMB's director with establishing a group within OIRA that is tasked with this responsibility. It should have authority to push agencies to either affirmatively promote innovation or to achieve a particular regulatory objective in a manner least damaging to innovation.<sup>5</sup> **(Responsibility for carrying out this proposal: OMB.)**

### Refocus and rename the Office of Science and Technology Policy (OSTP) to be the Office of Science, Technology, and Innovation Policy (OSTIP).

When Congress established the White House Office of Science and Technology Policy (OSTP) in 1976, there was much less awareness or understanding of innovation or innovation policy. That clearly has changed around the world, leading some nations to refocus the missions of their equivalent councils, and to change their names accordingly, to encompass the strategic goal of innovation. For example, Japan now has a Council of Science, Technology, and Innovation. Similarly, the administration should ask Congress to formally change OSTP to OSTIP (Office of Science, Technology, and Innovation Policy) and establish a permanent assistant director for innovation.<sup>6</sup> **(Responsibility for carrying out this proposal: White House and Congress.)**

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Require agencies to establish innovation funds through which they allocate a dedicated share of their budgets to innovative projects.

Each federal agency that funds extramural activities should create an innovation fund comprised of at least 3 percent of the agency's budget for pilot programs that seek innovative ways of using technology to drive high-impact, transformational change.<sup>7</sup> For instance, the Department of Transportation (DOT) should repurpose money away from concrete and steel to cost-effective solutions that increase mobility, such as computerized adaptive traffic lights and parking meters, real-time traffic information, and intelligent vehicles and infrastructure. **(Responsibility for carrying out this proposal: OMB.)**

Expand NSF's I-Corps program.

The National Science Foundation's (NSF's) innovative I-Corps program fosters entrepreneurship that can lead to the commercialization of technology that has been supported previously by NSF-funded research.<sup>8</sup> While the I-Corps program has been a resounding success, it still lacks sufficient scope across the vast array of government agencies that support novel research that could be commercialized. Accordingly, the administration should expand the NSF I-Corps program to cover all federal agencies to further entrepreneurial training for all federally funded scientific researchers. **(Responsibility for overseeing this proposal: OSTP.)**

Intensify commercialization activities at national labs and research institutes.

America's national energy laboratories have insufficient incentive to invest time, energy, and resources in facilitating technology transfer. In fact, tech transfer is not even one of the eight main criteria used to evaluate national labs as part of the "Performance Evaluation and Management Plan" (PEMP, a kind of annual report card for the national labs).<sup>9</sup> Rather, the annual PEMP process treats successful transfers of technology to the market as mere afterthoughts. Elevating this important function to its own evaluation category would have a significant impact on the management of the labs, and it would help reverse the decades-old buildup of skepticism and intransigence toward commercialization. Adding a new "technology impact" evaluation category for national labs would create a stronger incentive for lab managers to focus on market implementation of valuable intellectual-property assets and technical capabilities.<sup>10</sup> **(Responsibility for overseeing this proposal: OSTP and Energy Department.)**

Establish stronger university entrepreneurship and technology transfer metrics.

The federal government should collect better data regarding how well universities support technology commercialization. OSTP should direct NSF to rank research universities on this basis using indicators such as the number of new business starts, amount of industry R&D funding, patents, and technology licenses.<sup>11</sup> **(Responsibility for overseeing this proposal: OSTP and NSF.)**

Establish comprehensive open data requirements for the federal government.

Opening up government data for public use enables substantial economic and social benefits, increases government transparency, and reduces fraud, waste, and abuse. However, all open-data requirements currently in place for the federal government are the result of executive actions and thus do not carry the weight of the law. The new

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administration should continue to expand on the Obama administration's open-data initiatives. Longer term, the White House should work with Congress to pass legislation such as the bipartisan OPEN Government Data Act, which codifies and improves on these requirements and defines publishing open data as an official responsibility of federal agencies.<sup>12</sup> **(Responsibility for carrying out this proposal: White House.)**

**Challenge federal agencies to develop 100 APIs in 100 days.**

The Obama administration catalyzed the open data movement in the president's first day in office by challenging government agencies to be more transparent, participatory, and collaborative and then later calling for every federal agency to release three high-value data sets within 45 days. The Trump administration should similarly catalyze a new era of digital government by challenging federal agencies to collectively develop 100 application programming interfaces (APIs) within 100 days. APIs are software standards that let different computer systems communicate, and they are the key building blocks of today's digital world of apps, widgets, and websites. By building APIs for government services—whether to request information on national parks or to submit an application to the U.S. Patent and Trademark Office—the federal government will open up new opportunities for developers to create applications that benefit citizens and businesses and streamline how they interact with government. This is crucial to the next stage in e-government because many federal agencies have been unwilling or unable to create the kinds of applications that would truly advance citizen-friendly digital government services.<sup>13</sup> **(Responsibility for carrying out this proposal: OMB.)**

**Develop a model data-driven school district for K-12 education.**

Though many sectors of the economy have completely restructured their operations around the new opportunities afforded by data-driven technologies, the education system has yet to undergo such a transformation. To kick start the process, the Department of Education should launch a challenge program to establish a several-year, fully data-driven school system pilot that can serve as a national model for educators. A fully data-driven education system that enables personalization, supports evidence-based learning, and encourages school efficiency has the potential to create a more productive workforce, increase economic opportunity for Americans, and strengthen national competitiveness. To participate in the challenge, school districts should agree to terms that would accelerate the data-driven transformation of the education system as a whole, including sharing data they collect as a result of the pilot to make it available to researchers, and prioritizing projects that can be easily replicated by other school districts after the pilot's completion. **(Responsibility for carrying out this proposal: Department of Education.)**

**Declare that energy storage and the smart grid are national priorities and set challenge goals for them.**

The U.S. energy system will need to become more flexible and interactive if the country is to take full advantage of opportunities to mitigate climate change. Significant progress has been made in renewable electricity supply and electric vehicles, but these capabilities must now be integrated into an affordable, reliable system.<sup>14</sup> Energy storage is a key technological bottleneck. The full-scale application of information technology (IT) to

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electricity management will require organizational and institutional innovations as well as improved technologies. The White House should develop a clear set of goals through a collaborative process that focuses national efforts across all levels and sectors to solve these challenging problems. **(Responsibility for carrying out this proposal: Council on Environmental Quality, NEC, and OSTP.)**

Create an expert team from federal agencies to provide technical assistance to state utility commissioners on electricity policies.

State utility regulation is still largely based on a 20th century model that compensates utilities for maximizing electricity sales from large power plants. The interactive and distributed 21st century grid will require new models that only a few states have begun to grapple with. The federal government has tremendous technical resources in the national labs and elsewhere that could support the states as they make this transition and help to accelerate it. **(Responsibility for carrying out this proposal: CEQ.)**

Eliminate barriers to federal agency contracting for energy efficiency and renewable energy services.

Institutional and financial innovations have accelerated the private sector's adoption of new technologies and practices for energy management. Procurement and associated regulations have prevented federal agencies from adopting many of these innovations, even though the operational energy-management challenges for federal buildings and facilities are to a great extent the same as for private ones.<sup>15</sup> **(Responsibility for carrying out this proposal: OMB.)**

## RECOMMENDATIONS TO BOOST PRODUCTIVITY

Direct federal agencies to incorporate productivity growth into their missions.

No major economic or financial entity in the federal government—including the National Economic Council, the Council of Economic Advisers, the Commerce Department, and the Federal Reserve Board—has as an explicit part of its mission the goal of advancing productivity. The president should issue an executive order directing all such executive agencies to incorporate productivity growth as a core part of their missions.<sup>16</sup> As part of his order, the president should direct OMB to identify 50 government programs or processes that should be overhauled technologically to deliver greater value at lower cost to taxpayers by increasing their productivity. **(Responsibility for implementing the president's order: OMB.)**

Create a National Commission on Productivity.

Lagging productivity growth is the country's central economic challenge, yet few policymakers focus on it. To bring attention to the issue and begin shaping a national productivity policy, the president should appoint a National Commission on Productivity and charge it with exploring economic policy options that go beyond the conventional approach of focusing only on ensuring there is a generally conducive business climate with basic "factor inputs" such as skilled labor and ready access to capital.<sup>17</sup> **(Responsibility for carrying out this proposal: NEC.)**

Establish a digital infrastructure council.

The new administration should establish a digital infrastructure council that is made up of key officials from federal agencies involved in infrastructure, including Transportation,

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Interior, Housing and Urban Development, Defense, Energy, the Environmental Protection Agency (EPA), and the Federal Energy Regulatory Commission. These officials should meet regularly to discuss how their agencies plan to use digital technologies such as the Internet of Things, data analytics, and artificial intelligence to improve infrastructures they control, from the power grid to water systems and roads. In addition, the president should charge each agency with developing strategies within six months to advance the transition to digital infrastructure in their respective areas of influence. For example, Transportation should lay out a strategy for promoting the rapid deployment and adoption of proven intelligent transportation systems; Defense should offer a strategy for how it can use IT to modernize infrastructure at defense installations across the nation; and EPA should focus on making water and waste systems intelligent.<sup>18</sup> **(Responsibility for coordinating this proposal: NEC.)**

**Create a set-aside of 5 or 10 percent within the national infrastructure plan to support hybrid digital infrastructure**

The president-elect campaigned on investing significant funds to improve infrastructure. To do that effectively, the administration should focus on transforming our nation's infrastructure with digital technologies. Water, transportation, energy, and communications systems must become smarter, more responsive, and more flexible. These sectors have historically been slow adopters of new technologies. A well-designed infrastructure innovation program will accelerate progress by demonstrating results in practice and at scale. **(Responsibility for carrying out this proposal: NEC.)**

**Create a dedicated capital fund for federal agencies to upgrade their IT systems.**

The White House should work with Congress on legislation along the lines of the Modernizing Outdated and Vulnerable Equipment and Information Technology (MOVE IT) Act of 2016 to authorize an IT Innovation Fund that would establish working capital funds for every federal agency to upgrade and modernize its information technology systems. The IT Innovation Fund would allow agencies to repurpose funds that would have been spent on operations and invest them in more efficient technology, and then keep a portion of the savings. This program would encourage federal agencies to seek out cost savings and increased productivity while also modernizing outdated IT systems and holding federal chief information officers accountable for spending. **(Responsibility for carrying out this proposal: White House and Congress.)**

**Update the Agriculture Department's rural broadband support mechanisms.**

The administration should direct the U.S. Department of Agriculture's (USDA's) Rural Utilities Service (RUS) to transition its funding to competitive bidding awards for broadband infrastructure deployed in unserved rural areas instead of continuing to partially support overbuilding (for example, by subsidizing the buildout of broadband networks in areas that already have at least one network in place). Grants should be predicated on not accepting high-cost fund support for loan repayment. One-off grants for rural deployment can be an important mechanism to overcome the high fixed costs associated with rural builds, but too often RUS grants go to wasteful overbuilds, some of which then turn to the Federal Communications Commission's (FCC's) high-cost fund to repay the loans. RUS

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also should investigate the appropriateness of fixed wireless broadband to serve rural areas, while maintaining a goal of technological neutrality. **(Responsibility for carrying out this proposal: OSTP and USDA.)**

**Follow through on “dig-once” initiatives.**

It has long been considered a “no-brainer” for the Transportation Department to lay conduit along highway projects that already require repaving of streets. So-called “dig-once” policies make the deployment of additional network infrastructure much less costly and more efficient, and should be in place wherever possible. The Transportation Department should make federal financing of highways, roads, and bridges contingent on joint deployment of conduit by qualified parties.<sup>19</sup> **(Responsibility for carrying out this proposal: National Telecommunications and Information Administration and DOT.)**

**Streamline access, permitting, and leasing of federal land and assets to speed buildout of fiber and wireless networks.**

Agencies should facilitate network deployment on federal lands and buildings, with a uniform, expedited process for permitting and leasing to ease siting of wireless infrastructure or new fiber networks. As it stands, gaining access to federal rights of way can take significantly longer than contracting with private parties. The government should make this process as uniform and streamlined as possible, putting in place a single regime for deploying network infrastructure assets of the departments of Agriculture, Commerce, Defense, Interior, Transportation, Veterans Affairs, and the U.S. Postal Service. **(Responsibility for carrying out this proposal: OSTP-coordinated multi-agency effort.)**

**Free additional spectrum for flexible use.**

A priority for the new administration should be finding mechanisms to reallocate underutilized spectrum for more valuable commercial uses. To that end, the president should issue an executive order in his first 180 days that sets an ambitious new goal beyond the 500 megahertz that is targeted to be repurposed under the Obama administration’s National Broadband Plan.<sup>20</sup> In achieving a new, higher goal, a key opportunity will be leveraging spectrum held by federal users. The administration, through a coordinated effort between the NTIA and the FCC, should develop and implement an effective mechanism to incentivize federal users, especially the Defense Department, to identify opportunities to upgrade systems that would free up spectrum. As a part of this effort, where sharing of spectrum is absolutely necessary to protect incumbent systems, NTIA and the FCC should work to develop realistic, risk-based interference tolerance thresholds for legacy systems, rather than overly broad, worst-case protections. **(Responsibility for carrying out this proposal: NTIA.)**

## **RECOMMENDATIONS TO IMPROVE U.S. COMPETITIVENESS**

**Establish a new directorate for trade and competitiveness issues within the National Security Council.**

Since World War II, global competitiveness issues have almost always been a second-order priority in U.S. policy compared to diplomacy and national security considerations. Yet America’s national security increasingly depends on its technological leadership. To elevate tech-based competitiveness issues in the White House, the president should create a new

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post within the National Security Council (NSC)—a deputy national security adviser for trade and competitiveness—to complement the work now performed by the deputy national security adviser for international economic affairs. Among other responsibilities, a key role of this new post would be to identify and assess the strategic economic plans of competitors such as China.<sup>21</sup> **(Responsibility for carrying out this proposal: NSC.)**

**Require OIRA to incorporate a “competitiveness screen” in reviewing federal regulations.** In many cases, agencies have choices with regard to how they meet the public interest goals such as worker safety and environmental protection, but regulatory choices can and do increase costs for industries in traded sectors, which makes them less competitive globally. Regulatory agencies seeking to impose regulations that affect traded sectors in non-trivial ways should be required to have such regulations undergo a review by OIRA for their first-order competitiveness impact.<sup>22</sup> For example, environmental regulations that might directly affect how semiconductors are produced would be required to undergo review. However, regulations affecting what local governments must do to treat wastewater would not. While this might have second-order impacts on traded sectors (e.g., municipalities’ costs could increase, thereby requiring them to raise taxes on traded and non-traded sectors), it would not directly affect traded sectors. Given the limited amount of time and attention available for regulatory review, the highest priority should be placed on reviewing those regulations that directly impact traded sectors. **(Responsibility for overseeing this proposal: OMB.)**

**Intensify commercial diplomacy.**

While the last administration made improvements in “commercial diplomacy”—that is, using the foreign resources of the U.S. government to spur U.S. international competitiveness—the new administration can and should do more. The NEC should take the lead on this, working with the departments of Commerce and State, and drawing on the work that the American Academy of Diplomacy has done on the topic with support from the Una Chapman Cox Foundation.<sup>23</sup> **(Responsibility for carrying out this proposal: NEC with the departments of State and Commerce.)**

**Create a traded-sector analysis unit to develop strategic plans to bolster the competitiveness of U.S. industries.**

No federal entity is responsible for analyzing the state of U.S. competitiveness—that is, for understanding the global competitiveness of major U.S. industries and the effects that the policies of the United States and other countries have on that competitiveness. The president should task the National Institute of Standards and Technology (NIST) with creating a traded-sector analysis unit that prioritizes interpretation and analysis. It should assess key indicators of overall U.S. competitive performance—such as foreign direct investment, jobs, output, and market share—and develop strategic policy road maps for key traded sectors.<sup>24</sup> **(Responsibility for carrying out this proposal: NEC and NIST.)**

**Direct small business loans toward globally traded sectors.**

The Small Business Administration (SBA) guarantees loans to small businesses. But making a loan to a firm in a non-traded sector (such as a restaurant or dry cleaner) almost never creates a net increase in jobs nationally, because any expansion of the business comes at the

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expense of other firms in the same industry. As such, the White House should direct the SBA to set up procedures to ensure that at least two-thirds of its loans go to firms in globally traded sectors such as manufacturing, agriculture, and software, where expansion can be focused on increasing global sales.<sup>25</sup> **(Responsibility for carrying out this proposal: OMB and SBA.)**

**Create an annual Global Mercantilist Index report to catalogue foreign policies that subvert technological innovation.**

The president should direct the U.S. Trade Representative (USTR) to produce an annual Global Mercantilist Index report that comprehensively documents and ranks trade barriers that U.S. trading partners impose on innovative products and services. Currently, USTR's annual Special 301 Report catalogues countries that maintain inadequate intellectual property protections and enforcement mechanisms, and its National Trade Estimate Report on Foreign Trade Barriers provides an effective inventory of significant foreign barriers to U.S. exports and investment. But the administration lacks a consolidated report that comprehensively identifies and ranks the worst cases in which U.S. trading partners adopt mercantilist policies that specifically subvert or inhibit technological innovation.<sup>26</sup> **(Responsibility for carrying out this proposal: USTR.)**

**Create an Office of Globalization Strategy within USTR.**

The president should create a new Office of Globalization Strategy within USTR. Too often, USTR engages in rearguard actions to ward off the tariffs or trade wars of the past. It is not set up, either institutionally or philosophically, to fight the war that the country is engaged in today against rampant innovation mercantilism fueled by non-tariff barriers. Similar to the State Department's Office of Policy Planning, the new USTR office would be charged with focusing on U.S. trade policy in the context of globalization and competitiveness. To that end, one of its roles should be to ensure there is strong inter-agency collaboration so that all relevant agencies and departments of government share a common understanding of both the threats posed by foreign innovation mercantilism and how the United States should respond. **(Responsibility for carrying out this proposal: USTR.)**

**Launch an Innovation Attaches program in U.S. embassies.**

Close to a dozen nations have innovation attaches in their U.S. embassies who are tasked with activities such as technology scouting, opportunity identification, and informing domestic businesses about the innovation strategies of U.S. companies and government agencies. The United States should likewise designate innovation attaches in the capitals of major U.S. trading partners. One of the attaches' duties would be to promote licensing of U.S. intellectual property and technology. U.S. exports for the use of intellectual property reached \$130 billion in 2014, yet the commercial potential of the foreign licensing has yet to be fully tapped. **(Responsibility for overseeing this proposal: departments of State and Commerce.)**

**Update review procedures for the Committee on Foreign Investment (CFIUS).**

The Committee on Foreign Investment (CFIUS)—the inter-agency body that reviews foreign investments in U.S. businesses to determine whether there are national security implications—needs marching orders that reflect the realities of modern-day, state-led

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innovation mercantilism. For example, the Chinese government, as part of its industrial development strategy, has directed and financed Chinese firms to buy U.S. companies in order to acquire and relocate their technologies and intellectual property to China.<sup>27</sup> To confront this, the White House should work with Congress to update the authorizing legislation for CFIUS in several important ways. First, CFIUS review procedures should allow reviewers to move beyond strict national security criteria to a more comprehensive “national interest” or “net-benefit test” that considers the broader impact of such non-commercially motivated investments. (Australia, Canada, and the United Kingdom have similar processes.) Second, given the broad economic interests involved, the Commerce Department should be the lead agency for CFIUS instead of Treasury. Third, CFIUS should move beyond case-by-case examinations to analyze the broader context of transactions to determine if they represent systemic threats. Finally, CFIUS review periods also should be extended to allow reviewers more than 30 calendar days to approve transactions or move them to a second-stage investigation. **(Responsibility for overseeing this proposal: departments of Treasury and Commerce and Congress.)**

**Initiate negotiations to forge a “Geneva Convention on the Status of Data.”**

Revelations about the U.S. intelligence community’s digital surveillance programs risk harming the global competitiveness of U.S. companies if foreign governments and customers shun their technologies and services. To resolve this issue, the president should direct the U.S. Trade Representative to initiate negotiations with U.S. trading partners to establish international legal standards for government access to data in a “Geneva Convention on the Status of Data.” Such an agreement would instill confidence in the foundations of the digital economy by establishing international rules for transparency, settling questions of jurisdiction, expediting and better coordinating international law enforcement requests, and limiting unnecessary access by governments to citizens of other countries. Only by working to establish a global pact can countries hold each other accountable on these issues in the future.<sup>28</sup> **(Responsibility for carrying out this proposal: USTR.)**

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21. As an example, China released a seminal document in January 2006 called the *National Medium- and Long-Term Program for Science and Technology Development (2006-2020)*, or “MLP,” which called on China to master 402 key technologies, from intelligent automobiles to integrated circuits and high-performance computers. It reportedly took the U.S. government four years to notice and translate the plan.
22. Stephen J. Ezell and Robert D. Atkinson, “Fifty Ways to Leave Your Competitiveness Woes Behind: A National Traded Sector Competitiveness Strategy” (Information Technology and Innovation Foundation, September 2011), 41-42, <http://www2.itif.org/2012-fifty-ways-competitiveness-woes-behind.pdf>.
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## **CORRECTION**

An earlier version of this report included a recommendation to eliminate the U.S. Digital Service (USDS) from the Office of Management and Budget and replace it with a new team of IT experts within the General Services Administration to help agencies implement major IT initiatives. This recommendation has been removed because ITIF actually believes there is good reason for the USDS to provide the capabilities it does within the White House, and because agency CIOs should have authority and accountability to implement major IT initiatives. We regret the error.

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